



Cisco Unified CM Trace

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Trace

Cisco Unified Serviceability provides trace tools to assist you in troubleshooting issues with your voice application. Cisco Unified Serviceability supports SDI (System Diagnostic Interface) trace, SDL (Signaling Distribution Layer) trace (for Cisco CallManager and Cisco CTIManager services, applicable to Cisco Unified Communications Manager and Cisco Unified Communications Manager Business Edition 5000 only), and Log4J trace (for Java applications).

You use the Trace Configuration window to specify the level of information that you want traced as well the type of information that you want to be included in each trace file.

Unified CM and Unified CM BE only: If the service is a call-processing application such as Cisco CallManager or Cisco CTIManager, you can configure a trace on devices such as phones and gateway.

(Unified CM and Unified CM BE only: In the Alarm Configuration window, you can direct alarms to various locations, including SDI trace log files, or SDL trace log files. If you want to do so, you can configure trace for alerts in the Cisco Unified Real-Time Monitoring Tool (RTMT).

After you have configured information that you want to include in the trace files for the various services, you can collect and view trace files by using the trace and log central option in the Cisco Unified Real-Time Monitoring Tool.

Trace configuration

You can configure trace parameters for any feature or network service that displays in Cisco Unified Serviceability. If you have clusters (Cisco Unified Communications Manager only), you can configure trace parameters for any feature or network service that is available on any Cisco Unified Communications Manager server in the cluster. Use the Trace Configuration window to specify the parameters that you want to trace for troubleshooting problems.

You can configure the level of information that you want traced (debug level), what information you want to trace (trace fields), and information about the trace files (such as number of files per service, size of file, and

time that the data is stored in the trace files.) If you have clusters (Cisco Unified Communications Manager only), you can configure trace for a single service or apply the trace settings for that service to all servers in the cluster.

If you want to use predetermined troubleshooting trace settings rather than choosing your own trace fields, you can use the Troubleshooting Trace window. For more information on troubleshooting trace, see the [Trace settings, on page 2](#).

After you have configured information that you want to include in the trace files for the various services, you can collect trace files by using the trace and log central option in RTMT. For more information regarding trace collection, see the [Trace collection, on page 2](#).

Trace settings

The Troubleshooting Trace Settings window allows you to choose the services in Cisco Unified Serviceability for which you want to set predetermined troubleshooting trace settings. In this window, you can choose a single service or multiple services and change the trace settings for those services to the predetermined trace settings. If you have clusters (Cisco Unified Communications Manager only), you can choose the services on different Cisco Unified Communications Manager servers in the cluster, so the trace settings of the chosen services get changed to the predetermined trace settings. You can choose specific activated services for a single server, all activated services for the server, specific activated services for all servers in the cluster, or all activated services for all servers in the cluster. In the window, N/A displays next to inactive services.



Note

The predetermined troubleshooting trace settings for a Cisco Unified Communications Manager feature or network service include SDL (Cisco Unified Communications Manager and Cisco Unified Communications Manager Business Edition 5000 only), SDI, and Log4j trace settings. Before the troubleshooting trace settings get applied, the system backs up the original trace settings. When you reset the troubleshooting trace settings, the original trace settings get restored.

When you open the Troubleshooting Trace Settings window after you apply troubleshooting trace settings to a service, the service that you set for troubleshooting displays as checked. In the Troubleshooting Trace Settings window, you can reset the trace settings to the original settings.

After you apply Troubleshooting Trace Setting to a service, the Trace Configuration window displays a message that troubleshooting trace is set for the given service(s). From the Related Links drop-down list box, you can choose the Troubleshooting Trace Settings option if you want to reset the settings for the service. For the given service, the Trace Configuration window displays all the settings as read-only, except for some parameters of trace output settings; for example, Maximum No. of Files. You can modify these parameters even after you apply troubleshooting trace settings.

Trace collection

Use Trace and Log Central, an option in the Cisco Unified Real-Time Monitoring Tool, to collect, view, and zip various service traces and/or other log files. With the Trace and Log Central option, you can collect SDL/SDI traces, Application Logs, System Logs (such as Event View Application, Security, and System logs), and crash dump files.

**Tip**

Do not use NotePad to view collected trace files to view collected trace files, because NotePad does not properly display line breaks.

**Note**

Unified CM and Unified CM BE only: For devices that support encryption, the SRTP keying material does not display in the trace file.

For more information on trace collection, refer to the Cisco Unified Real-Time Monitoring Tool Administration Guide.

Called Party tracing

Called Party Tracing allows you to configure a directory number or list of directory numbers that you want to trace. You can request on-demand tracing of calls using the Session Trace Tool.

For more information, see the Cisco Unified Real-Time Monitoring Tool Administration Guide.

Set up trace configuration

The following steps provide an overview of the steps for configuring and collecting trace for feature and network services in Cisco Unified Serviceability.

Procedure

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- Step 1** Configure the values of the TLC Throttling CPU Goal and TLC Throttling IOWait Goal service parameters (Cisco RIS Data Collector service) by doing the applicable step:
- Unified CM and Unified CM BE only: Choose **System > ServiceParameters** in Cisco Unified Communications Manager Administration and configure the values of the TLC Throttling CPU Goal and TLC Throttling IOWait Goal service parameters (Cisco RIS Data Collector service).
 - Connection only: Choose **System Settings > Service Parameters** in Cisco Unity Connection Administration and configure the values of the TLC Throttling CPU Goal and TLC Throttling IOWait Goal service parameters (Cisco RIS Data Collector service).
- Step 2** Configure the trace setting for the service for which you want to collect traces. If you have clusters (Cisco Unified Communications Manager only), you can configure trace for the service on one server or on all servers in the cluster.
- To configure trace settings, choose what information you want to include in the trace log by choosing the debug level and trace fields.
- If you want to run predetermined traces on services, set troubleshooting trace for those services.
- Step 3** Install the Cisco Unified Real-Time Monitoring Tool on a local PC.
- Step 4** If you want to generate an alarm when the specified search string exists in a monitored trace file, enable the LogFileSearchStringFound alert in RTMT.
- You can find the LogFileSearchStringFound alarm in the LpmTctCatalog. (In Cisco Unified Serviceability, choose **Alarms > Definitions**. In the Find alarms where drop-down list box, choose the **System Alarm Catalog**; in the Equals drop-down list box, choose **LpmTctCatalog**.)

- Step 5** If you want to automatically capture traces for alerts such as CriticalServiceDown and CodeYellow, check the **Enable Trace Download** check box in the Set Alert/Properties dialog box for the specific alert in RTMT; configure how often that you want the download to occur.
- Step 6** Collect the traces.
- Step 7** View the log file in the appropriate viewer.
- Step 8** If you enabled troubleshooting trace, reset the trace settings services, so the original settings get restored.
- Note** Leaving Troubleshooting trace enabled for a long time increases the size of the trace files and may impact the performance of the services.

Related Topics

[Set up troubleshooting trace settings, on page 20](#)

Configure trace

This section provides information for configuring trace settings.



Note

Enabling trace decreases system performance; therefore, enable trace only for troubleshooting purposes. For assistance in using trace, contact your technical support team.

Set up trace parameters

This section describes how to configure trace parameters for feature and network services that you manage through Cisco Unified Serviceability.



Tip

Unified CM BE and Connection only: For Cisco Unity Connection, you may need to run trace in Cisco Unified Serviceability and Cisco Unity Connection Serviceability to troubleshoot Cisco Unity Connection issues. To troubleshoot services that are supported in Cisco Unified Serviceability, you run trace in Cisco Unified Serviceability. Similarly, to troubleshoot Cisco Unity Connection components, you run trace in Cisco Unity Connection Serviceability. For information on how to run trace in Cisco Unity Connection Serviceability, refer to the *Cisco Unity Connection Serviceability Administration Guide*.

Procedure

- Step 1** Choose **Trace > Configuration**.
The Trace Configuration window displays.
- Step 2** From the Server drop-down list box, choose the server that is running the service for which you want to configure trace; then, click **Go**.
- Step 3** From the Service Group drop-down list box, choose the service group for the service that you want to configure trace; then, click **Go**.

- Tip** [Table 1: Service Groups in Trace Configuration, on page 5](#) lists the services and trace libraries that correspond to the options that display in the Service Group drop-down list box.
- Step 4** From the Service drop-down list box, choose the service for which you want to configure trace; then, click **Go**.
The drop-down list box displays active and inactive services.
- Tip** Unified CM and Unified CM BE only: For the Cisco CallManager and CTIManager services, you can configure SDL trace parameters. To do so, open the Trace Configuration window for one of those services, and click the **Go** button that is next to the Related Links drop-down list box.
If you configured Troubleshooting Trace for the service, a message displays at the top of the window that indicates that the Troubleshooting Traces feature is set, which means that the system disables all fields in the Trace Configuration window except for Trace Output Settings. To configure the Trace Output Settings, go to step 11. To reset Troubleshooting Trace, see the [Set up troubleshooting trace settings, on page 20](#).
The trace parameters display for the service that you chose. In addition, the Apply to All Nodes check box displays (Cisco Unified Communications Manager only).
- Step 5** Unified CM only: If you want to do so, you can apply the trace settings for the service or trace library to all servers in the cluster by checking the **Apply to All Nodes** check box; that is, if your configuration supports clusters.
- Step 6** Check the **Trace On** check box.
- Step 7** Unified CM and Unified CM BE only: If you are configuring SDL trace parameters, go to step 10.
- Step 8** From the Debug Trace Level drop-down list box, choose the level of information that you want traced, as described in [Debug trace level settings, on page 8](#).
- Step 9** Check the Trace Fields check box for the service that you chose; for example, Cisco Log Partition Monitoring Tool Trace Fields.
- Step 10** If the service does not have multiple trace settings where you can specify the traces that you want to activate, check the **Enable All Trace** check box. If the service that you chose has multiple trace settings, check the check boxes next to the trace check boxes that you want to enable, as described in [Trace field descriptions, on page 10](#).
- Step 11** To limit the number and size of the trace files, specify the trace output setting. See [Table 17: Trace Output Settings, on page 20](#) for descriptions.
- Step 12** To save your trace parameters configuration, click the **Save** button.
The changes to trace configuration take effect immediately for all services except Cisco Messaging Interface (Cisco Unified Communications Manager and Cisco Unified Communications Manager Business Edition 5000 only). The trace configuration changes for Cisco Messaging Interface take effect in 3 to 5 minutes.

Note To set the default, click the **Set Default** button.

Service groups in trace configuration

The following table lists the services and trace libraries that correspond to the options in the Service Group drop-down list box in the Trace Configuration window.

Table 1: Service Groups in Trace Configuration

Service Group	Services and Trace Libraries	Notes
Unified CM and Unified CM BE only: CM Services	Cisco CTIManager, Cisco CallManager, Cisco CallManager Cisco IP Phone Service, Cisco DHCP Monitor Service, Cisco Dialed Number Analyzer, Cisco Dialed Number Analyzer Server, Cisco Extended Functions, Cisco Extension Mobility, Cisco Extension Mobility Application, Cisco IP Voice Media Streaming App, Cisco Messaging Interface, Cisco TFTP, and Cisco Unified Mobile Voice Access Service	For most services in the CM Services group, you run trace for specific components, instead of enabling all trace for the service. The Trace field descriptions, on page 10 lists the services for which you can run trace for specific components.
Unified CM and Unified CM BE only: CTI Services	Cisco IP Manager Assistant, and Cisco Web Dialer Web Service	For these services, you can run trace for specific components, instead of enabling all trace for the service; see the Trace field descriptions, on page 10 .
Unified CM and Unified CM BE only: CDR Services	Cisco CAR Scheduler, Cisco CAR Web Service, Cisco CDR Agent, and Cisco CDR Repository Manager	<p>You enable all trace for each service, instead of running trace for specific components.</p> <p>In CAR, when reports are run that call stored procedures, CAR checks the configured debug trace level for the Cisco CAR Scheduler service and the Cisco CAR Web Service in the Trace Configuration window before stored procedure logging begins. For pregenerated reports, CAR checks the level for the Cisco CAR Scheduler service; for on-demand reports, CAR checks the level for the Cisco CAR Web Service. If you choose Debug from the Debug Trace Level drop-down list box, stored procedure logging gets enabled and continues until you choose another option from the drop-down list box. The following CAR reports use stored procedure logging: Gateway Utilization report, Route and Line Group Utilization report, Route/Hunt List Utilization report, Route Pattern/Hunt Pilot Utilization report, Conference Call Details report, Conference Call Summary report, Conference Bridge Utilization report, Voice Messaging Utilization report, and the CDR Search report.</p>

Service Group	Services and Trace Libraries	Notes
Database and Admin Services	<p>Cisco AXL Web Service, Cisco CCM DBL Web Library, Cisco CCMAdmin Web Service, Cisco CCMUser Web Service, Cisco Database Layer Monitor, and Cisco UXL Web Service</p> <p>Unified CM and Unified CM BE only: Cisco Bulk Provisioning Service, Cisco GRT Communications Web Service, Cisco Role-based Security, Cisco TAPS Service, and Cisco Unified Reporting Web Service</p> <p>Unified CM BE only: Cisco License Manager</p>	<p>Choosing the Cisco CCM DBL Web Library option activates the trace for database access for Java applications. For database access for C++ applications, activate trace for Cisco Database Layer Monitor, as described in the Cisco Extended Functions trace fields, on page 16.</p> <p>Choosing the Cisco Role-based Security option, which supports Cisco Unified Communications Manager, activates trace for user-role authorization.</p> <p>For most services in the Database and Admin Services group, you enable all trace for the service/library, instead of enabling trace for specific components. For Cisco Database Layer Monitor, you can run trace for specific components.</p>
Performance and Monitoring Services	<p>Cisco AMC Service, Cisco CCM NCS Web Library, CCM PD Web Service, Cisco CallManager SNMP Service, Cisco Log Partition Monitoring Tool, Cisco RIS Data Collector, Cisco RTMT Web Service, Cisco Audit Event Service, and Cisco RisBean Library.</p> <p>Unified CM and Unified CM BE only: Cisco CCM PD Web Service</p>	<p>Choosing the Cisco CCM NCS Web Library option activates trace for database change notification for the Java client.</p> <p>Choosing the Cisco RTMT Web Service option activates trace for the RTMT servlets; running this trace creates the server-side log for RTMT client queries.</p>
Unified CM and Unified CM BE only: Security Services	Cisco CTL Provider, Cisco Certificate Authority Proxy Function, and Cisco Trust Verification Service.	You enable all trace for each service, instead of running trace for specific components.
Unified CM and Unified CM BE only: Directory Services	Cisco DirSync	You enable all trace for this service, instead of running trace for specific components.
Backup and Restore Services	Cisco DRF Local and Cisco DRF Master	You enable all trace for each service, instead of running trace for specific components.

Service Group	Services and Trace Libraries	Notes
System Services	Cisco CCMRealm Web Service, Cisco CCMSERVICE Web Service, Cisco Common User Interface, and Cisco Trace Collection Service	<p>Choosing the Cisco CCMRealm Web Service option activates trace for login authentication.</p> <p>Choosing the Cisco Common User Interface option activates trace for the common code that multiple applications use; for example, Cisco Unified Operating System Administration and Cisco Unified Serviceability.</p> <p>Choosing the Cisco CCMSERVICE Web Service option activates trace for the Cisco Unified Serviceability web application (GUI).</p> <p>You enable all trace for each option/service, instead of running trace for specific components.</p>
SOAP Services	Cisco SOAP Web Service and Cisco SOAPMessage Service	<p>Choosing the Cisco SOAP Web Service option activates the trace for the AXL Serviceability API.</p> <p>You enable all trace for this service, instead of running trace for specific components.</p>
Platform Services	Cisco Unified OS Admin Web Service	<p>The Cisco Unified OS Admin Web Service supports Cisco Unified Operating System Administration, which is the web application that provides management of platform-related functionality such as certificate management, version settings, and installations and upgrades.</p> <p>You enable all trace for this service, instead of running trace for specific components.</p>

Debug trace level settings

Table 2: Debug Trace Levels for Services, on page 9 describes the debug trace level settings for services.

Table 2: Debug Trace Levels for Services

Level	Description
Error	Traces alarm conditions and events. Used for all traces that are generated in abnormal path. Uses minimum number of CPU cycles.
Special	Traces all Error conditions plus process and device initialization messages.
State Transition	Traces all Special conditions plus subsystem state transitions that occur during normal operation. Traces call-processing events.
Significant	Traces all State Transition conditions plus media layer events that occur during normal operation.
Entry/Exit	Note Not all services use this trace level. Traces all Significant conditions plus entry and exit points of routines.
Arbitrary	Traces all Entry/Exit conditions plus low-level debugging information.
Detailed	Traces all Arbitrary conditions plus detailed debugging information.

Table 3: Debug Trace Levels for Servlets, [on page 9](#) describes the debug trace level settings for servlets.

Table 3: Debug Trace Levels for Servlets

Level	Description
Fatal	Traces very severe error events that may cause the application to abort.
Error	Traces alarm conditions and events. Used for all traces that are generated in abnormal path.
Warn	Traces potentially harmful situations.
Info	Traces the majority of servlet problems and has a minimal effect on system performance.
Debug	Traces all State Transition conditions plus media layer events that occur during normal operation. Trace level that turns on all logging.

Trace field descriptions

For some services, you can activate trace for specific components, instead of enabling all trace for the service. The following list includes the services for which you can activate trace for specific components. Clicking one of the cross-references takes you to the applicable section where a description displays for each trace field for the service. If a service does not exist in the following list, the Enable All Trace check box displays for the service in the Trace Configuration window.

The following services are applicable to Cisco Unified Communications Manager, Cisco Unified Communications Manager Business Edition 5000, and Cisco Unity Connection:

- [Database layer monitor trace fields, on page 10](#)
- [Cisco RIS data collector trace fields, on page 11](#)

The following services are applicable to Cisco Unified Communications Manager and Cisco Unified Communications Manager Business Edition 5000 only:

- [Cisco CallManager SDI trace fields, on page 11](#)
- [Cisco CallManager SDL trace fields, on page 13](#)
- [Cisco CTIManager SDL trace fields, on page 15](#)
- [Cisco Extended Functions trace fields, on page 16](#)
- [Cisco Extension Mobility trace fields, on page 17](#)
- [Cisco IP manager assistant trace fields, on page 17](#)
- [Cisco IP voice media streaming app trace fields, on page 18](#)
- [Cisco TFTP trace fields, on page 19](#)
- [Cisco Web Dialer web service trace fields, on page 19](#)

Database layer monitor trace fields

[Table 4: Cisco Database Layer Monitor Trace Fields, on page 10](#) describes the Cisco Database Layer Monitor trace fields. The Cisco Database Layer Monitor service supports Cisco Unified Communications Manager and Cisco Unity Connection.

Table 4: Cisco Database Layer Monitor Trace Fields

Field Name	Description
Enable DB Library Trace	Activates database library trace for C++ applications.
Enable Service Trace	Activates service trace.
Enable DB Change Notification Trace	Activates the database change notification traces for C++ applications.
Enable Unit Test Trace	Do not check this check box. Cisco engineering uses it for debugging purposes.

Cisco RIS data collector trace fields

[Table 5: Cisco RIS Data Collector Trace Fields, on page 11](#) describes the Cisco RIS Data Collector trace fields. The Cisco RIS Data Collector service supports Cisco Unified Communications Manager and Cisco Unity Connection.

Table 5: Cisco RIS Data Collector Trace Fields

Field Name	Description
Enable RISDC Trace	Activates trace for the RISDC thread of the RIS data collector service (RIS).
Enable System Access Trace	Activates trace for the system access library in the RIS data collector.
Enable Link Services Trace	Activates trace for the link services library in the RIS data collector.
Enable RISDC Access Trace	Activates trace for the RISDC access library in the RIS data collector.
Enable RISDB Trace	Activates trace for the RISDB library in the RIS data collector.
Enable PI Trace	Activates trace for the PI library in the RIS data collector.
Enable XML Trace	Activates trace for the input/output XML messages of the RIS data collector service.
Enable Perfmon Logger Trace	Activates trace for the troubleshooting perfmon data logging in the RIS data collector. Used to trace the name of the log file, the total number of counters that are logged, the names of the application and system counters and instances, calculation of process and thread CPU percentage, and occurrences of log file rollover and deletion.

Cisco CallManager SDI trace fields

[Table 6: Cisco CallManager SDI Trace Fields, on page 12](#) describes the Cisco CallManager SDI trace fields. The Cisco CallManager service supports Cisco Unified Communications Manager.

Table 6: Cisco CallManager SDI Trace Fields

Field Name	Description
Enable H245 Message Trace	Activates trace of H245 messages.
Enable DT-24+/DE-30+ Trace	Activates the logging of ISDN type of DT-24+/DE-30+ device traces.
Enable PRI Trace	Activates trace of primary rate interface (PRI) devices.
Enable ISDN Translation Trace	Activates ISDN message traces. Used for normal debugging.
Enable H225 & Gatekeeper Trace	Activates trace of H.225 devices. Used for normal debugging.
Enable Miscellaneous Trace	Activates trace of miscellaneous devices. Note Do not check this check box during normal system operation.
Enable Conference Bridge Trace	Activates trace of conference bridges. Used for normal debugging.
Enable Music on Hold Trace	Activates trace of music on hold (MOH) devices. Used to trace MOH device status such as registered with Cisco Unified Communications Manager, unregistered with Cisco Unified Communications Manager, and resource allocation processed successfully or failed.
Enable Unified CMReal-Time Information Server Trace	Activates Cisco Unified Communications Manager real-time information traces that the real-time information server uses.
Enable SIP Stack Trace	Activates trace of SIP stack. Note Enabling SIP Stack Trace can cause extreme performance degradation especially during high traffic hours.
Enable Annunciator Trace	Activates trace for the annunciator, a SCCP device that uses the Cisco IP Voice Media Streaming Application service to enable Cisco Unified Communications Manager to play prerecorded announcements (.wav files) and tones to Cisco Unified IP Phones, gateways, and other configurable devices.
Enable CDR Trace	Activates traces for CDR.
Enable Analog Trunk Trace	Activates trace of all analog trunk (AT) gateways.

Field Name	Description
Enable All Phone Device Trace	Activates trace of phone devices. Trace information includes SoftPhone devices. Used for normal debugging.
Enable MTP Trace	Activates trace of media termination point (MTP) devices. Used for normal debugging.
Enable All Gateway Trace	Activates trace of all analog and digital gateways.
Enable Forward and Miscellaneous Trace	Activates trace for call forwarding and all subsystems that are not covered by another check box. Used for normal debugging.
Enable MGCP Trace	Activates trace for media gateway control protocol (MGCP) devices. Used for normal debugging.
Enable Media Resource Manager Trace	Activates trace for media resource manager (MRM) activities.
Enable SIP Call Processing Trace	Activates trace for SIP call processing.
Enable SCCP Keep Alive Trace	Activates trace for SCCP keepalive trace information in the Cisco CallManager traces. Because each SCCP device reports keepalive messages every 30 seconds, and each keepalive message creates 3 lines of trace data, the system generates a large amount of trace data when this check box is checked.
Enable SIP Keep Alive (REGISTER Refresh) Trace	Activates trace for SIP keepalive (REGISTER refresh) trace information in the Cisco CallManager traces. Because each SIP device reports keepalive messages every 2 minutes, and each keepalive message can create multiple lines of trace data, the system generates a large amount of trace data when this check box is checked.

Cisco CallManager SDL trace fields

[Table 17: Trace Output Settings](#), on page 20 describes the Cisco CallManager SDL trace filter settings. [Table 8: Cisco CallManager SDL Configuration Trace Characteristics](#), on page 14 describes the Cisco CallManager SDL configuration characteristics. The Cisco CallManager service supports Cisco Unified Communications Manager.



Note

Cisco recommends that you use the defaults unless a Cisco engineer instructs you to do otherwise.

Table 7: Cisco CallManager SDL Configuration Trace Filter Settings

Setting Name	Description
Enable all Layer 1 traces.	Activates traces for Layer 1.
Enable detailed Layer 1 traces.	Activates detailed Layer 1 traces.
Enable all Layer 2 traces.	Activates traces for Layer 2.
Enable Layer 2 interface trace.	Activates Layer 2 interface traces.
Enable Layer 2 TCP trace.	Activates Layer 2 Transmission Control Program (TCP) traces.
Enable detailed dump Layer 2 trace.	Activates detailed traces for dump Layer 2.
Enable all Layer 3 traces.	Activates traces for Layer 3.
Enable all call control traces.	Activates traces for call control.
Enable miscellaneous polls trace.	Activates traces for miscellaneous polls.
Enable miscellaneous trace (database signals).	Activates miscellaneous traces such as database signals.
Enable message translation signals trace.	Activates traces for message translation signals.
Enable UUIE output trace.	Activates traces for user-to-user informational element (UUIE) output.
Enable gateway signals trace.	Activates traces for gateway signals.
Enable CTI trace.	Activates CTI trace.
Enable network service data trace	Activates network service data trace.
Enable network service event trace	Activates network service event trace.
Enable ICCP admin trace	Activates ICCP administration trace.
Enable default trace	Activates default trace.

Table 8: Cisco CallManager SDL Configuration Trace Characteristics

Characteristics	Description
Enable SDL link states trace.	Activates trace for intracluster communication protocol (ICCP) link state.

Characteristics	Description
Enable low-level SDL trace.	Activates trace for low-level SDL.
Enable SDL link poll trace.	Activates trace for ICCP link poll.
Enable SDL link messages trace.	Activates trace for ICCP raw messages.
Enable signal data dump trace.	Activates traces for signal data dump.
Enable correlation tag mapping trace.	Activates traces for correlation tag mapping.
Enable SDL process states trace.	Activates traces for SDL process states.
Disable pretty print of SDL trace.	Disables trace for pretty print of SDL. Pretty print adds tabs and spaces in a trace file without performing post processing.
Enable SDL TCP event trace.	Activates SDL TCP event trace.

Cisco CTIManager SDL trace fields

[Table 9: Cisco CTIManager SDL Configuration Trace Filter Settings, on page 15](#) describes the Cisco CTIManager SDL configuration trace filter settings. [Table 10: Cisco CTIManager SDL Configuration Trace Characteristics, on page 16](#) describes the Cisco CTIManager SDL configuration trace characteristics. The Cisco CTIManager service supports Cisco Unified Communications Manager.



Tip

Cisco recommends that you use the defaults unless a Cisco engineer instructs you to do otherwise.



Tip

When you choose the CTIManager service from the Service Groups drop-down list box, the Trace Configuration window displays for SDI traces for this service. To activate SDI trace for the Cisco CTI Manager service, check the **Enable All Trace** check box in the Trace Configuration window for the Cisco CTIManager service. To access the SDL Configuration window, choose **SDL Configuration** from the Related Links drop-down list box; the settings that are described in [Table 9: Cisco CTIManager SDL Configuration Trace Filter Settings, on page 15](#) and [Table 10: Cisco CTIManager SDL Configuration Trace Characteristics, on page 16](#) display.

Table 9: Cisco CTIManager SDL Configuration Trace Filter Settings

Setting Name	Description
Enable miscellaneous polls trace.	Activates traces for miscellaneous polls.
Enable miscellaneous trace (database signals).	Activates miscellaneous traces such as database signals.

Setting Name	Description
Enable CTI trace.	Activates CTI trace.
Enable Network Service Data Trace	Activates network service data trace.
Enable Network Service Event Trace	Activates network service event trace.
Enable ICCP Admin Trace	Activates ICCP administration trace.
Enable Default Trace	Activates default trace.

Table 10: Cisco CTIManager SDL Configuration Trace Characteristics

Characteristics	Description
Enable SDL link states trace.	Activates trace for ICCP link state.
Enable low-level SDL trace.	Activates trace for low-level SDL.
Enable SDL link poll trace.	Activates trace for ICCP link poll.
Enable SDL link messages trace.	Activates trace for ICCP raw messages.
Enable signal data dump trace.	Activates traces for signal data dump.
Enable correlation tag mapping trace.	Activates traces for correlation tag mapping.
Enable SDL process states trace.	Activates traces for SDL process states.
Disable pretty print of SDL trace.	Disables trace for pretty print of SDL. Pretty print adds tabs and spaces in a trace file without performing post processing.
Enable SDL TCP Event trace	Activates SDL TCP event trace.

Cisco Extended Functions trace fields

[Table 11: Cisco Extended Functions Trace Fields](#), on page 16 describes the Cisco Extended Functions trace fields. The Cisco Extended Functions service supports Cisco Unified Communications Manager.

Table 11: Cisco Extended Functions Trace Fields

Field Name	Description
Enable QBE Helper TSP Trace	Activates telephony service provider trace.

Field Name	Description
Enable QBE Helper TSPI Trace	Activates QBE helper TSP interface trace.
Enable QRT Dictionary Trace	Activates quality report tool service dictionary trace.
Enable DOM Helper Traces	Activates DOM helper trace.
Enable Redundancy and Change Notification Trace	Activates database change notification trace.
Enable QRT Report Handler Trace	Activates quality report tool report handler trace.
Enable QBE Helper CTI Trace	Activates QBE helper CTI trace.
Enable QRT Service Trace	Activates quality report tool service related trace.
Enable QRT DB Traces	Activates QRT DB access trace.
Enable Template Map Traces	Activates standard template map and multimap trace.
Enable QRT Event Handler Trace	Activates quality report tool event handler trace.
Enable QRT Real-Time Information Server Trace	Activates quality report tool real-time information server trace.

Cisco Extension Mobility trace fields

[Table 12: Cisco Extension Mobility Trace Fields](#), on page 17 describes the Cisco Extension Mobility trace fields. The Cisco Extension Mobility service supports Cisco Unified Communications Manager.

Table 12: Cisco Extension Mobility Trace Fields

Field Name	Description
Enable EM Service Trace	Activates trace for the extension mobility service.



Tip

When you activate trace for the Cisco Extension Mobility Application service, you check the Enable All Trace check box in the Trace Configuration window for the Cisco Extension Mobility Application service.

Cisco IP manager assistant trace fields

[Table 13: Cisco IP Manager Assistant Trace Fields](#), on page 18 describes the Cisco IP Manager Assistant trace fields. The Cisco IP Manager Assistant service supports Cisco Unified Communications Manager Assistant.

Table 13: Cisco IP Manager Assistant Trace Fields

Field Name	Description
Enable IPMA Service Trace	Activates trace for the Cisco IP Manager Assistant service.
Enable IPMA Manager Configuration Change Log	Activates trace for the changes that you make to the manager and assistant configurations.
Enable IPMA CTI Trace	Activates trace for the CTI Manager connection.
Enable IPMA CTI Security Trace	Activates trace for the secure connection to CTIManager.

Cisco IP voice media streaming app trace fields

The information in this section does not apply to Cisco Unity Connection.

[Table 14: Cisco IP Voice Media Streaming Application Trace Fields, on page 18](#) describes the Cisco IP Voice Media Streaming App trace fields. The Cisco IP Voice Media Streaming App service supports Cisco Unified Communications Manager.

Table 14: Cisco IP Voice Media Streaming Application Trace Fields

Field Name	Description
Enable Service Initialization Trace	Activates trace for initialization information.
Enable MTP Device Trace	Activates traces to monitor the processed messages for media termination point (MTP).
Enable Device Recovery Trace	Activates traces for device-recovery-related information for MTP, conference bridge, and MOH.
Enable Skinny Station Messages Trace	Activates traces for skinny station protocol.
Enable WinSock Level 2 Trace	Activates trace for high-level, detailed WinSock-related information.
Enable Music On Hold Manager Trace	Activates trace to monitor MOH audio source manager.
Enable Annunciator Trace	Activates trace to monitor annunciator.
Enable DB Setup Manager Trace	Activates trace to monitor database setup and changes for MTP, conference bridge, and MOH.
Enable Conference Bridge Device Trace	Activates traces to monitor the processed messages for conference bridge.

Field Name	Description
Enable Device Driver Trace	Activates device driver traces.
Enable WinSock Level 1 Trace	Activates trace for low-level, general, WinSock-related information.
Enable Music on Hold Device Trace	Activates traces to monitor the processed messages for MOH.
Enable TFTP Downloads Trace	Activates trace to monitor the download of MOH audio source files.

Cisco TFTP trace fields

[Table 15: Cisco TFTP Trace Fields, on page 19](#) describes the Cisco TFTP trace fields. The Cisco TFTP service supports Cisco Unified Communications Manager.

Table 15: Cisco TFTP Trace Fields

Field Name	Description
Enable Service System Trace	Activates trace for service system.
Enable Build File Trace	Activates trace for build files.
Enable Serve File Trace	Activates trace for serve files.

Cisco Web Dialer web service trace fields

[Table 16: Cisco Web Dialer Web Service Trace Fields, on page 19](#) describes the Cisco Web Dialer Web Service trace fields. The Cisco Web Dialer Web Service supports Cisco Unified Communications Manager.

Table 16: Cisco Web Dialer Web Service Trace Fields

Field Name	Description
Enable Web Dialer Servlet Trace	Activates trace for Cisco Web Dialer servlet.
Enable Redirector Servlet Trace	Activates trace for the Redirector servlet.

Trace output settings

[Table 17: Trace Output Settings, on page 20](#) contains the trace log file descriptions.

**Caution**

When you change either the Maximum No. of Files or the Maximum File Size settings in the Trace Configuration window, the system deletes all service log files except for the current file, that is, if the service is running; if the service has not been activated, the system deletes the files immediately after you activate the service. Before you change the Maximum No. of Files setting or the Maximum File Size setting, download and save the service log files to another server if you want to keep a record of the log files; to perform this task, use Trace and Log Central in RTMT.

Table 17: Trace Output Settings

Field	Description
Maximum number of files	This field specifies the total number of trace files for a given service. Cisco Unified Serviceability automatically appends a sequence number to the file name to indicate which file it is; for example, cus299.txt. When the last file in the sequence is full, the trace data begins writing over the first file. The default varies by service.
Maximum file size (MB)	This field specifies the maximum size of the trace file in megabytes. The default varies by service.

Set up troubleshooting trace settings

The Troubleshooting Trace Settings window allows you to choose the services for which you want to set predetermined troubleshooting trace settings. This chapter contains information on how to set and reset troubleshooting trace settings for services that exist in Cisco Unified Serviceability.

**Note**

Leaving Troubleshooting Trace enabled for a long time increases the size of the trace files and may impact the performance of the services.

Procedure

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- Step 1** In Cisco Unified Serviceability, choose **Trace > Troubleshooting Trace Settings**.
- Step 2** From the Server drop-down list box, choose the server where you want to troubleshoot trace settings; then, click **Go**.
- Note** A list of services displays. The services that are not activated display as N/A.
- Step 3** Perform one of the following tasks:
- To check specific services for the server that you chose in the Server drop-down list box, check the service(s) check box(es) in the Services pane; for example, the Database and Admin Services, Performance and Monitoring Services, or the Backup and Restore Services pane (and so on).

This task affects only the server that you chose in the Server drop-down list box.

b) Check one of the following check boxes:

- **Check All Services** - Automatically checks all check boxes for the services on the current server that you chose in the Server drop-down list box.
- Unified CM clusters only: **Check Selected Services on All Nodes** - Allows you to check specific service check boxes in the Troubleshooting Trace Setting window. This setting applies for all servers in the cluster where the service is activated.
- Unified CM clusters only: **Check All Services on All Nodes** - Automatically checks all check boxes for all services for all servers in the cluster. When you check this check box, the **Check All Services** and **Check Selected Services on All Nodes** check boxes automatically get checked.

Step 4 Click the **Save** button.

Caution If you have checked **Check All Services** check box, ensure that you uncheck Cisco Location Bandwidth Manager check box before you click **Save**. If this check box is not checked, the trace settings for some of the services will not get enabled.

Step 5 After you configure troubleshooting trace for one or more services, you can restore the original trace settings. If you want to restore the original trace settings, click one of the following buttons:

- a) **Reset Troubleshooting Traces** - Restores the original trace settings for the services on the server that you chose in the Server drop-down list box; also displays as an icon that you can click.
 - b) Unified CM clusters only: **Reset Troubleshooting Traces On All Nodes** - Restores the original trace settings for the services on all servers in the cluster.
After you click the **reset** button, the window refreshes, and the service check boxes display as unchecked.
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